

REMARKS

I. Status of the Claims

Claims 1-20 were rejected in the first Office Action dated July 27, 2004. In response to the first Office Action, claims 1, 10, 11 were amended in the response/amendment filed on November 5, 2004. Claims 1-20 were again rejected in the second Office Action dated January 27, 2005. Claims 1-20 are still currently pending.

II. Rejections Under 35 U.S.C. § 102(b)

Prima Facie Anticipation

In order to successfully set forth a rejection to a claim the Examiner must establish under 35 U.S.C. § 102, a *prima facie* case of unpatentability. A general definition of *prima facie* unpatentability is provided at 37 C.F.R. §1.56(b)(2)(ii):

A *prima facie* case of unpatentability is established when the information *compels a conclusion* that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability. (*emphasis added*)

"Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983) (citing *Soundscriber Corp. v. United States*, 360 F.2d 954, 960, 148 USPQ 298, 301 (Ct. Cl.), adopted, 149 USPQ 640 (Ct. Cl. 1966)), cert. denied, 469 U.S. 851 (1984). Thus, to anticipate Applicant's claims, the reference or references utilized as a basis for the rejection under 35 U.S.C. § 102 must disclose each element recited therein. "There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the

invention." *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 18 USPQ 2d 1001, 1010 (Fed. Cir. 1991).

To overcome the anticipation rejection, the applicants need only demonstrate that not all elements of a *prima facie* case of anticipation have been met, *i. e.*, show that the reference or references cited by the Examiner fails to disclose every element in each of the applicants' claims. "If the examination at the initial state does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent." *In re Oetiker*, 977 F.2d 1443, 24 USPQ 2d 1443, 1444 (Fed. Cir. 1992).

Hersey

The Examiner rejected claims 1, 3, 4, 8, 11, 14, 15 and 19 under 35 U.S.C. 102(b) as being anticipated by Hersey (US Patent No. 3,588, 395).

Regarding claims 1 and 11, the Examiner argued that Hersey teaches a sensor element 33, 40 located on a base 14, 26 cover 13 located proximate to the base, wherein the cover comprises a sensor diaphragm 51 and an inward dimple 54 that is formed into and a part of the cover; and a flanged 25 area formed to a bottom portion of the cover, wherein the flanged 25 area provides a surface for contacting a fixture 14 to which the sensor apparatus attaches and holding the sensor 33 40 apparatus to the fixture 14 in a manner which prevents the sensor diaphragm from contacting the fixture and inducing errors during sensor operations thereof.

The Applicants respectfully disagrees with this assessment. Claim 1 is directed toward a sensor apparatus, comprising: a sensor element located on a base; a cover located proximate to the base, wherein the cover comprises a sensor diaphragm and an inward dimple that is formed into and a part of the cover and wherein the inward dimple is formed from and incorporated into the cover; and a flanged area formed to a bottom portion of the cover, wherein the flanged area is connected to and surrounds the bottom portion of the cover and is further positioned parallel to the sensor diaphragm, such that the flanged area provides a surface for contacting a fixture to which the sensor apparatus attaches

and holding the sensor apparatus to the fixture in a manner which prevents the sensor diaphragm from contacting the fixture and inducing errors during sensor operations thereof. Amended claim 11 incorporates similar claim limitations.

Hersey does not teach, disclose or suggest that the flanged area is connected to and surrounds the bottom portion of the cover and is further positioned parallel to the sensor diaphragm, which is taught by Applicants' amended claims 1 and 11. The Applicants remind the Examiner that in order to succeed in establishing a rejection to claim under 35 U.S.C. § 102(b) as indicated above, the cited reference used as basis for rejecting the claims, must disclose each and every element and claim limitation of the rejection claim. If even one claim limitation is not disclosed in the cited reference (in this case, Hersey), then the rejection fails under the *prima facie* anticipation requirements of 35 U.S.C. § 102(b) detailed above.

In the present case, the Examiner has not demonstrated that Hersey discloses that the flanged area is connected to and surrounds the bottom portion of the cover and is further positioned parallel to the sensor diaphragm. Because this claim limitation is not shown by Hersey, the rejection to Applicants' amended claims 1 and 11 under 35 U.S.C. § 102(b) must be withdrawn. The Applicants therefore respectfully request withdrawal of the rejection to claims 1 and 11 under U.S.C. § 102(b) as being anticipated by Hersey.

Regarding claims 3 and 14 the Examiner argued that Hersey teaches that the dimple 54 is formed from and incorporated into the cover 13. The Applicants respectfully disagree with this assessment. Claims 3 and 4 have been cancelled by amendment as indicated herein. Therefore, in light of the cancellation of claims 3 and 14 by amendment, the Examiner arguments with respect to claims 3 and 14 are rendered moot. The Applicants respectfully request withdrawal of the rejection to claims 3 and 14.

Regarding claims 4 and 15, the Examiner argued that Hersey teaches a pressure transducer sensor diaphragm 51. Regarding claims 8 and 19, the Examiner argued that Hersey teaches a pressure sensor 10. The Applicants respectfully disagree with this assessment and submit that arguments presented

above against the rejection to claims 1 and 11 under 35 U.S.C. § 102(b) apply equally to the rejection to claims 4, 15 and 8, 19.

Thus, because Hersey does not show that that flanged area is connected to and surrounds the bottom portion of the cover and is further positioned parallel to the sensor diaphragm, the rejection to claims 4, 15, and 8, 19 fails. Hersey does not teach each and every claim limitations of Applicants' claims 4, 15, and 8, 19, including all of limitations of the claims from which claims 4, 15 and 8, 19 depend.

The Applicants therefore submit that the rejection to claims 1, 3, 4, 8, 11, 14, 15 and 19 under 35 U.S.C. § 102(b) based on Hersey has been traversed. The Applicants respectfully request that such rejections be withdrawn.

Lia et al.

The Examiner rejected claims 1, 2, 4, 11-13, 15 under 35 U.S.C. 102(b) as being anticipated by Lia et al (US Patent No. 5,966,829).

Regarding claims 1 and 11, the Examiner argued that Lia et al teaches a sensor element 34 40 located on a base (fig. 8 upper outer periphery) cover (fig. 8 lower outer periphery) located proximate to the base, wherein the cover comprises a sensor diaphragm 38 and an inward dimple 54 that is formed into and a part of the cover (fig. 8 lower outer periphery); and a flanged 140 area formed to a bottom portion of the cover, wherein the flanged 140 area provides a surface for contacting a fixture 152 to which the sensor apparatus attaches and holding the sensor 34 40 apparatus to the fixture 152 in a manner which prevents the sensor diaphragm from contacting the fixture (fig. 8) and inducing errors during sensor operations thereof.

The Applicants respectfully disagree with this assessment. Lia et al does not disclose, teach or suggest an inward dimple that is formed from and incorporated into the cover. The Applicants remind the Examiner that in order to succeed in establishing a rejection to a claim under 35 U.S.C. § 102(b) as indicated above, the cited reference used as basis for rejecting the claims, must disclose each and every element and claim limitation of the rejection claim. If

even one claim limitation is not disclosed in the cited reference (in this case, Hersey), then the rejection fails under the *prima facie* anticipation requirements of 35 U.S.C. § 102(b) detailed above.

In the present case, the Examiner has not demonstrated that Lia et al discloses an inward dimple that is formed from and incorporated into the cover. Because this claim limitation is not shown by Liu et al, the rejection to Applicants' amended claims 1 and 11 under 35 U.S.C. § 102(b) must be withdrawn. The Applicants therefore respectfully request withdrawal of the rejection to claims 1 and 11 under U.S.C. § 102(b) as being anticipated by Lia et al.

Regarding claims 2, 12, 13, the Examiner argued that Lia et al teaches that the flanged area 140 is connected to and surrounds the bottom portion of the cover (fig. 8 lower outer periphery) and is further positioned parallel to a least part of the sensor diaphragm 38 (fig. 8). The Applicants respectfully disagree with this assessment. Applicants note that claims 2 and 12 have been cancelled by amendment. Thus, the rejection to claims 2 and 12 under U.S.C. § 102(b) as being anticipated by Lia et al are rendered moot in light of the cancellation of these claims by amendment.

With respect to the rejection to claim 13, the Applicants note that the arguments presented above against the rejection to claims 1 and 11 under U.S.C. § 102(b) as being anticipated by Lia et al apply equally to the rejection to claim 13. Thus, as indicated above, Lie et al does not show all of the claim limitations of Applicants' claim 11, from which claim 13 depends. Therefore, because the rejection to claim 11 under U.S.C. § 102(b) as being anticipated by Lia fails the rejection to claim 13 also fails. The Applicants therefore respectfully request that the rejection to claims 2, 12 and 13 under U.S.C. § 102(b) as being anticipated by Lia be withdrawn.

Regarding claims 4 and 15, the Examiner argued that Lia et al. teaches a pressure transducer sensor diaphragm 34. The Applicants respectfully disagree with this assessment and submit that arguments presented above against the rejection to claims 1 and 11 under 35 U.S.C. § 102(b) as being anticipated by Lia et al apply equally to the rejection to claims 4 and 15. Thus, because Lia et al

does not disclose an inward dimple that is formed from and incorporated into the cover, the rejection to claims 4 and 15 under 35 U.S.C. § 102(b) as being anticipated by Lia et al fails.

Lie et al does not teach each and every claim limitations of Applicants' claims 4 and 15, including all of limitations of the claims from which claims 4 and 15 depend. The Applicants thus submit that the rejection to claims 4 and 15 under 35 U.S.C. § 102(b) based on Lie et al has been traversed. The Applicants respectfully request that such rejections be withdrawn.

III. Rejections Under 35 U.S.C. § 103(a)

Requirements for Prima Facie Obviousness

The obligation of the examiner to go forward and produce reasoning and evidence in support of obviousness is clearly defined at M.P.E.P. §2142: The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

M.P.E.P. §2143 sets out the three basic criteria that a patent examiner must satisfy to establish a *prima facie* case of obviousness:

1. some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
2. a reasonable expectation of success; and
3. the teaching or suggestion of all the claim limitations by the prior art reference (or references when combined).

It follows that in the absence of such a *prima facie* showing of obviousness by the examiner (assuming there are no objections or other grounds for rejection), an applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443 (Fed. Cir. 1992). Thus, in order to support an obviousness rejection, the Examiner is obliged to produce evidence compelling a conclusion that each of the three aforementioned basic criteria has been met.

Hersey in view of Kurtz et al.

The Examiner rejected Claims 7, 10 and 18 under 35 U.S.C. 103(a) as being unpatentable over Hersey (US Patent No. 3,588,395) in view of Kurtz et al (US Patent No. 5,999,082).

The Examiner argued that Hersey teaches all the basic features of the claimed invention, but admitted that Hersey does not teach a silicon pressure sensor. The Examiner argued that Kurtz et al teaches a sensor element, which comprises silicon (citing the abstract of Kurtz et al). The Examiner argued that it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the pressure sensor taught by Hersey with a silicon structure as taught by Kurtz et al for the purpose of cost effectively, efficiently and accurately sensing pressure that is being applied within a sensing structure (citing col. 1 line 13 through col. 2 line 18 of Kurtz et al).

The Applicants respectfully disagree with this assessment and submit that the arguments presented with respect to the rejection to claims 1, 3, 4, 8, 11, 14, 15 and 19 under 35 U.S.C. 102(b) as being anticipated by Hersey apply equally to the rejection to claims 7, 10 and 18 under 35 U.S.C. 103(a) as being unpatentable over Hersey in view of Kurtz et al. Thus, as indicated earlier, Hersey does not teach all of the claim limitations of Applicants' amended claims 1 and 11 upon which claims 7 and 18 respectfully depend. Additionally, Hersey does not teach all of the claim limitations of Applicants' amended claim 10. As will be explained shortly, Hersey, alone or in combination with Kurtz et al does not teach all the basic features of the claimed invention.

With respect to claim 7, the Applicant notes that claim 7 depends from Applicants' amended claim 1, which teaches an inward dimple that is formed from and incorporated into the cover and a flanged area formed to a bottom portion of the cover, and wherein the flanged area is connected to and surrounds the bottom portion of the cover and is further positioned parallel to the sensor diaphragm. Such claim limitations are not taught by Hersey, alone and/or

combination with Kurtz et al. Note that these arguments against the rejection to claim 7 apply equally to the rejection to claim 10.

With respect to claim 18, the Applicant, the Applicant notes that claim 18 depends from Applicants' amended claim 11, which teaches an inward dimple that is formed into and a part of the cover, wherein the inward dimple is formed from and incorporated into the cover, along with a flanged area formed at the bottom portion of the cover, wherein the flanged area is connected to the bottom portion of the cover. All of these claim limitations are not taught by Hersey in view of Kurtz et al. Applicant further notes that Kurtz et al does not teach or disclose an "inward dimple" as taught by Applicants invention, but instead teaches a protruded dimple.

Thus, the rejection to 7, 10 and 18 under 35 U.S.C. 103(a) as being unpatentable over Hersey in view of Kurtz et al fails under at least the third prong of the aforementioned prima facie obviousness test. That is, Hersey when combined with Kurtz et al does not support the teaching or suggestion of all the claim limitations of Applicants' claims 7, 10 and 18.

Additionally, the Applicants contend that the rejection to claims 7, 10 and 18 fails under the first and second prongs of the aforementioned prima facie obviousness test. That is, the Examiner has not provided some suggestion or motivation, in the Hersey and Kurtz et al references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings in order to achieve all of the claim limitations of claims 7, 10, and 18.

The Applicants separately contend that the rejection fails to satisfy first prong because, in view of the objectives and teachings of both the Hersey and Kurtz et al references, there is no motivation or suggestion to modify such references to provide for all of the features of Applicants' claims 7, 10 and 18. In this regard, the teaching or suggestion to make the modification and the reasonable expectation of success must both be found in both references, not in the applicants' disclosure.

The Examiner has also not provided an explanation of why a reasonable expectation of success of achieving all the limitations of claims 7, 10 and 18 would result from a combination of Hersey and Kurtz et al. The Examiner has not provided evidence, which suggests otherwise.

Based on the foregoing, Applicants submit that the rejection to claims 7, 10 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Hersey in view of Kurtz et al has been traversed. Applicants therefore request withdrawal of this rejection.

Hersey

The Examiner rejected claims 5, 6, 9, 16, 17 and 20 under 35 U.S.C. 103(a) as being unpatentable over Hersey (US Patent No. 3,588,395).

Regarding claims 5, 6, 16, 17 and 20, the Examiner argued that Hersey teaches all the basic features of the claimed invention but admitted that Hersey does not teach using quartz, ceramic or SAW type sensors. The Examiner argued, however, lacking any criticality it would have been obvious to one having skill in the art of pressure transducers at the time the invention was made to modify Hersey with ceramic or quartz since it has been held to be within the general skill of a worker in the art to select a material on the basis of its suitability and intended use. The Examiner cited *In re Leshin*, 125 USPQ 416 in support of this argument.

The Examiner asserted that in this particular case it would have been obvious to select the most feasible material readily available to the manufacture without undo experimentation and trial/error for the purpose of creating a pressure transducer that operates at optimum performance for the desired application. With respect to the implementation of SAW sensors, the examiner took official notice of the use of SAW sensors arguing that SAW type sensors are of notorious character in the art of pressure sensing.

The Applicants respectfully disagree with this assessment. Applicants note that claims 5, 6 and are dependent upon Applicants' amended claim 1, while claims 16, 17 and 20 are dependent upon Applicants' claim 11. The Applicants submit that the arguments presented with respect to the rejection to claims 1, 3, 4, 8, 11, 14, 15 and 19 under 35 U.S.C. 102(b) as being anticipated by Hersey apply equally to the rejection to claims 5, 6, 16, 17 and 20 under 35 U.S.C. 103(a) as being unpatentable over Hersey.

Thus, as indicated earlier, Hersey does not teach all of the claim limitations of Applicants' amended claims 1 and 11 upon which claims 5, 6 and 16, 17, 20 respectfully depend. The use of SAW type sensors is deemed irrelevant in light of the fact that Hersey does not teach all of the claim limitations of Applicants claims 5, 6 and 16, 17, and 20, which include all of the limitations of the claims from which claims 5, 6 and 16, 17, and 20 depend.

With respect to claim 5, 6, the Applicant notes that claims 5, 6 depends from Applicants' amended claim 1, which teaches an inward dimple that is formed from and incorporated into the cover and a flanged area formed to a bottom portion of the cover, wherein the flanged area is connected to and surrounds the bottom portion of the cover and is further positioned parallel to the sensor diaphragm. All of these claim limitations are not taught by Hersey.

With respect to claims 16, 17 and 20, the Applicant notes that claims 16, 17 and 20 depend from Applicants' amended claim 11, which teaches an inward dimple that is formed into and a part of the cover, wherein the inward dimple is formed from and incorporated into the cover, along with a flanged area formed at the bottom portion of the cover, wherein the flanged area is connected to the bottom portion of the cover. All of these claim limitations are not taught by Hersey.

Thus, the rejection to claims 5, 6, 16, 17 and 20 under 35 U.S.C. 103(a) as being unpatentable over Hersey fails under at least the third prong of the aforementioned *prima facie* obviousness test. That is, Hersey when modified as suggested by the Examiner does not support the teaching or suggestion of all the

claim limitations of Applicants' claims 5, 6, 16, 17 and 20. The Examiner has not indicated how Hersey when modified as suggested, teaches all of the claim limitations of Applicants' claims 5, 6, 16, 17 and 20.

Additionally, the Applicants contend that the rejection to claims 5, 6, 16, 17 and 20 fails under the first and second prongs of the aforementioned *prima facie* obviousness test. That is, the Examiner has not provided some suggestion or motivation, in the Hersey reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the Hersey reference to achieve all of the claim limitations of claims 5, 6, 16, 17 and 20. The Examiner has also not provided an explanation of why a reasonable expectation of success of achieving all the limitations of claims 5, 6, 16, 17 and 20 would result from a modification of Hersey as suggested.

The Applicants separately contend that the rejection fails to satisfy the first prong because, in view of the objectives and teachings of the Hersey reference, there is no motivation or suggestion to modify the Hersey to provide for all of the features and claim limitations of Applicants' claims 5, 6, 16, 17 and 20. In this regard, the teaching or suggestion to make the modification and the reasonable expectation of success must both be found in the Hersey reference itself, not in the Applicants' disclosure.

Based on the foregoing, Applicants submit that the rejection to claims 5, 6, 16, 17 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Hersey has been traversed. Applicants therefore request withdrawal of this rejection.

IV. Conclusion

In view of the foregoing remarks, the Applicants submit that Applicants' claims are patentably distinct over the prior art references and are in allowable form. Accordingly, the Applicants earnestly solicit the favorable consideration of their application, and respectfully request that it be passed to issue in its present condition.

Should the Examiner discern any remaining impediment to the prompt allowance of the aforementioned claims that might be resolved or overcome with the aid a telephone conference, he is cordially invited to call the undersigned at the telephone number set out below.

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Respectfully submitted,



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